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than any other value in said waveform and third value is greater than any other value in said waveform with the exception of the first value.

Please cancel claim 11.

## **REMARKS:**

Reconsideration is respectfully requested.

Various 35 U.S.C. 112 objections have been raised against claim 1. In order to obviate these rejections, applicants have amended claim 1 to better describe their invention. It is respectfully submitted that this amendment, which will be discussed elsewhere in this specification, has obviated these 35 U.S.C. 112 objections.

The examiner has rejected claims 1, 6, 7, and 11 under 35 USC 112, second paragraph, as being indefinite. Thus, e.g., the Examiner has objected to the phrase "at least part of the spectra of a desired energy pattern contains at least a major peak and a minor peak" and terms therein. This phrase, and other terms objected to the by the Examiner, have either been deleted from claim 1 and/or have been reworded. It is respectfully submitted that claim 1, as amended, is definite and is allowable; and the allowance thereof is respectfully requested.

The applicants have amended their claims to better define their invention; and the claims so amended clearly distinguish from the prior art. The instant invention may be distinguished from the prior art by, e.g., describing the presence of at least two peaks in the spectra of the energy emitted by the applicants' apparatus. Prior art energy emitters suggest only a single peak in the spectra of the energy emitted. To further define the multiple peaks found in a spectra of the energy emitted by the applicants' invention,

claim 1 has been amended to delete the phrase that was objected to by the Examiner as well as to clearly define a waveform consisting of multiple peaks.

Bases for the amended claim 1 may be found in the specification and the original claims and drawings. Thus, e.g., particular reference may be had, for example, to Figures 10, 11, and 12. Such Figures clearly show a spectra of the energy emitted by the applicants' invention which contains two or more peaks.

Most of the terms objected to by the Examiner have been deleted. Thus, e.g., the Examiner has rejected claim 1 under 35 USC 112 stating, "Claim 1 cites the limitation 'and/or' which is vague and indefinite..." To facilitate the prosecution of this case, applicants have deleted the "and/or" term.

The examiner has rejected claim 1 under 35 USC 112 stating, "...the phrase 'desired energy pattern' is vague and indefinite as it is not distinctly clear whether the energy pattern is predetermined or not..." While the applicants do not necessarily agree that the phrase is indefinite, to facilitate prosecution, claim 1 has been amended to delete the language objected to.

Applicant has amended claim 1 to recite that "...said energy is represented by a predetermined continuous waveform graph..." Bases for this amendment may be found in the specification, in applicants' original claims, and in their drawings. Thus, e.g., particular reference may be had, for example, Figures 10, 11, and 12 and to lines 11 through 12 of page 14.

The examiner has rejected claim 11 under 35 USC 112 stating, "Claim 11 is vague and indefinite for citing the limitation 'implantable' as it is not distinctly or particularly clear what the apparatus is implantable in..." While the applicants do not

necessarily agree that the claim is indefinite, to facilitate prosecution the applicants have elected to cancel the claim.

The examiner has rejected claims 1, 6, 7 and 11 under 35 U.S.C. 102 on the grounds that they are anticipated by Smith (U.S. Patent No 5,528,652) stating "The energy emitting apparatus of Smith is capable of meeting the functional use recitations cited in the claims as it emits low and high energy corresponding to the minor and major peaks of the desired energy spectrum." It is respectfully submitted that this rejection, although inapplicable with regard to applicants' unamended claims, is especially inapplicable against the amended claims.

Applicants respectfully submit the Smith reference does not teach or suggest applicants' claimed invention. Smith teaches the emission of a range of energy frequencies, such that a spectra of the emission of Smith contains a single peak. By comparison, applicants' claimed invention describes emission of a range of energy frequencies, such that a spectra of the emission contains at least two peaks.

In particular, the Smith patent (see, e.g., column 8, lines 18-29) teaches the emission of either high wavelength energy or low wavelength energy; but does not teach or suggest the step of simultaneously emitting both high and low wavelength energy peaks. As such, a spectra of the high wavelength emission of Smith would contain a single high wavelength peak. Likewise, a spectra of the low wavelength emission of Smith would contain a single low wavelength peak. In no instance does Smith teach or suggest a spectra in which two peaks appear simultaneously.

The examiner has rejected claims 1, 6, 7 and 11 under 35 U.S.C. 102 on the grounds that they are anticipated by Schulman (U.S. Patent 6,208,894) stating "High and

low frequency corresponds to high and low energy and therefore, Schulman's microstimulator system which is capable of delivering high and low frequency stimulations, meets the functional use recitations cited in the claims." It is respectfully submitted that this rejection, although inapplicable with regard to applicants' unamended claims, is especially inapplicable against the amended claims.

Applicants respectfully submit the Schulman reference does not teach or suggest applicants' claimed invention. Schulman teaches the emission of a range of energy frequencies, such that a spectra of the emission of Schulman contains a single peak. By comparison, applicants' claimed invention describes emission of a range of energy frequencies, such that a spectra of the emission contains at least two peaks.

In particular, the Schulman patent teaches the emission of either high frequency energy or low frequency energy; but does not teach or suggest the step of simultaneously emitting both high and low frequency energy peaks. As such, a spectra of the high frequency emission of Schulman would contain a single high frequency peak. Likewise, a spectra of the low frequency emission of Schulman would contain a single low frequency peak. In no instance does Schulman teach or suggest a spectra in which two peaks appear simultaneously.

The examiner has required restriction between the inventions disclosed in claims 2-6, and 7-9, and 10, 12-20, as each being drawn to a patentably distinct invention. On or about September 16, 2002, applicants' counsel provisionally elected the species of claims 6 and 7, with traverse. Applicants' hereby affirm such election, but they respectfully submit that the restriction requirement should be withdrawn. It is respectfully submitted

that the subject matters of claims 2-6, and 7-9, and 10, 12-20 are not patentably distinct from each other.

It is respectfully submitted that the amended claims of this case are clearly allowable. If, for any reason, the Patent Examiner believes that a telephone conference with applicant's counsel might in any way facilitate the prosecution of this case, he is respectfully requested to call such counsel.

Respectfully submitted,

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U.S.S.N. 09/930,364

## **VERSION WITH MARKINGS TO SHOW CHANGES MADE**

## IN THE CLAIMS:

In the claims please amend the application as follows:

1. An apparatus for treating a substrate, said apparatus comprising means for emitting and delivering energy to said substrate, a programmable controller for varying the [type and/or amount of] energy emitted, and means for sensing a condition of said substrate, wherein said energy [emitted by said apparatus comprises at least] is represented by a predetermined continuous waveform graph wherein said graph comprises a continuous line that rises to a first value and thereafter declines to a second value and thereafter rises to a third value, and thereafter declines to a fourth value, wherein said first value is greater than any other value in said waveform and third value is greater than any other value in said waveform with the exception of the first value. [part of the spectra of a desired energy pattern contains at least a major peak and a minor peak].

[11. The apparatus as recited in claim 1, wherein said apparatus is implantable.]